

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

June 14, 2013

Human Performance

Human Performance Specialist's Factual Report

A. INCIDENT

Operator: Era Aviation
Location: Anchorage, Alaska
Date: September 5, 2012
Time: 1100 Alaska daylight time (AKDT)¹
Aircraft: DHC-8-100, N886EA
NTSB #: DCA12IA141

B. GROUP

The Human Performance Specialist joined the Operational Factors/Human Performance Group. This report summarizes human performance information that supplements the factual report of Operational Factors group.

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¹All times in the report will be in Alaska daylight time

C. SUMMARY

On September 5, 2012, about 1041 Alaska daylight time, Era Aviation (d.b.a. Era Alaska) flight 874, a Bombardier DHC-8-103, registration N886EA, experienced an uncommanded left roll and uncontrolled descent during climb at about 12,000 feet. The flight crew regained control of the airplane at about 7,000 feet and the flight returned to Ted Stevens Anchorage International Airport (ANC), Anchorage, Alaska. There were no injuries to the 12 passengers or 3 crew members, and the airplane was not damaged. The flight was operating under the provisions of 14 Code of Federal Regulations Part 121 as a regularly scheduled passenger flight between ANC and Homer Airport (HOM), Homer, Alaska. Daylight instrument meteorological conditions prevailed at the time of the incident.

D. DETAILS OF THE INVESTIGATION

The Operations and Human performance Group Chairmen conducted telephone interviews with the two incident pilots on September 7, 2012, and with the assistant chief pilot and the vice president of operations on September 18, 2012. David Keenan of the FAA and Bill Kolstad of Era Aviation assisted in the pilot interviews and Bill Kolstad assisted in the management interviews.

An Operations/Human Performance Group was formed on September 24, 2012 with the addition of Steve Albert, POI of Horizon Airlines, as the FAA representative and David Senko, a Dash 8 line check airman, as the Era representative. TSB Canada and Bombardier were invited to attend but declined. The Operations/Human Performance Group conducted interviews of company personnel September 24 and 25, 2012. On September 26 the group met at the Denali Certificate Management Office (CMO) in Anchorage and conducted interviews of FAA personnel. On September 27, Roger Cox and Maryam Allahyar observed regularly scheduled Era flights in the morning from the jump-seat and later met with the group at the CMO to reconcile interview notes. Eric West of the FAA provided witness statements.

The Operations/Human Performance Group conducted additional interviews with the FAA inspectors. Roger Cox and Maryam Allahyar also contacted Grant Aviation and Frontier Flying Services former managers in November and December 2012.

E. FACTUAL INFORMATION

1 Flight Crew Information

1.1 Captain

1.1.1 Background

The captain, age 41, was a Dash 8 captain at Era Aviation, and had been in that position since May 2012. He held no other duties at the company. Prior to this position he was a Beech 1900 captain and line check airman. He held that position for 4.5 years. He was hired by Era on November 27, 2000. He had approximately 8000 hours total flight time, with 300 hours as captain in the Dash 8. He had flown the Dash 8 for about 2.5 years as a first officer and estimated that he had about 3000 hours in the Dash 8. He estimated his total pilot in command (PIC) time to be between 3000 and 4000 hours. He held an airline transport pilot, single and multi-engine land certificate and was type rated in the Beech 1900 and Dash 8. He held a first class medical, dated May 17, 2012, with no limitations.²

1.1.2 Activity / 72-Hour History

The captain reported that he normally worked anywhere from 3 to 6 consecutive days, with a minimum of one day off, but sometimes more. The morning schedule duty day usually began at 0400. He sometimes had an afternoon schedule. His recent activities were as follows:

On Sunday, September 2, 2012, he woke up about 0430. He, his wife, and his friends participated in a bicycling event for most of the day until dinner time. He went to bed about 2200 and did not have difficulty falling asleep. Electronic data³ from his cellphone records indicated activity between 0634 and 2009 hours.

On Monday, September 3, 2012, he woke up about 0800. He spent the morning driving home from the previous day's bicycling event. In the afternoon, he engaged in routine family activities. He went to bed about 2100. Electronic data from his cellphone records indicated activity between 1121 and 1826 hours.

On Tuesday, September 4, 2012, he woke up about 0600. To the best of his knowledge, he reported to work that day; however, he could not recall his schedule at the time of the interview. Era Aviation's September 4 flight log for the captain showed a departure time out of Anchorage at 0927 and arrival time of 1733, with a total flight time of 5 hours and 16 minutes. The captain reported that he went to bed about 2100 and fell asleep quickly. Electronic data from his cellphone records indicated activity between 0700 and 2113 hours.

² For more detailed information on the captain's pilot certification and ratings see Operations Factual Report, pp. 6

³ Electronic data include incoming and outgoing texts and telephone calls, and any mobile internet data usage.

On Wednesday, September 5, 2012, he was on reserve. He received a call from the dispatcher about 0410⁴ informing him that he needed to report to work at 0650. He tried to sleep after the phone call, but was not successful for about 30 minutes. While that was not restful, he reported that he had had a restful sleep prior to the phone call. He got up and got ready for work. He had breakfast and two cups of coffee prior to the event flight. The captain stated that he started his duty day at 0400 and reported to work at 0650. Prior to the incident flight, he flew from Anchorage to Cordova, departing at 0741 and returning to Anchorage at 0959. The incident flight departure time was at 1021. Electronic data from his cellphone records indicated activity between 0506 and 1927 hours.

1.1.3 Medical/Personal Issues

The captain lived with his wife and children in Palmer, Alaska. He stated that he had good vision and hearing, and described his health as “pretty excellent”, with no changes in the past 12 months. He exercised and was conscientious of his diet.

The captain stated that the quality and quantity of his sleep in the days before the incident was not affected by any factors. He did not suffer from any diagnosed sleep disorders; however, he had gone through periods when he felt he was not getting restful sleep for weeks or even a couple of months. He mostly thought his sleep was fairly normal.

The captain was a nonsmoker who did not take any prescription medications, but occasionally took vitamin supplements. He described his use of alcohol as occasional and thought the last time he had consumed an alcoholic beverage before the incident was Monday, September 3rd.

The captain's financial situation had improved by receiving a raise in the past year when he became a Dash 8 captain. He did not report any other personal life changes in the past year.

On June 15, 2010, Era Aviation issued a driving restriction to the captain prohibiting him from operating any company motor vehicles.⁵ According to the chief pilot at that time, the driving restriction was issued after the captain disclosed to Era Aviation that he had been in a traffic accident which was his fault. There were no records of the

⁴ According to the captain's cellphone records, the first telephone activity on September 5, 2012 was at 0611. It is possible that the 0410 phone call was made to a different phone number other than captain's cellphone.

⁵ See attachment 5.

traffic accident in the captain's file. An inquiry for the driving records of the captain in the state of Alaska revealed ten traffic violations between February 2004 and April 2011. Five of these traffic violations were issued in the 3 years prior to the incident flight.

1.1.4 Prior Reported Incidents

A few weeks prior to the incident flight, the captain flew to a scheduled destination without taking the flight log book. Upon arriving at his destination, the captain contacted the company and requested the log book to be flown to his location. The vice president of operations and the chief pilot at Era Aviation were unhappy about this event. The vice president of operations requested an administrative action to be taken against the captain. The nature of the administrative action was in the process of being determined when flight 874, the incident flight took place.

1.2 First Officer

1.2.1 Background

The first officer, age 44, had been at Era Aviation for 2 years; however, he had been with Era Alaska since 2007. He had been flying the Dash 8 for approximately 2 years at Era Aviation. Prior to his employment with Era Aviation, he was employed by Frontier Aviation flying Beechcraft 1900s for about 3 years before transferring to Era Aviation in the Dash 8 program. His previous experience also included flying Cessna 207s for Grant Aviation in Western Alaska for 2.5 years. His total flight time was approximately 6000 hours. He estimated at least 1600 flight hours were in the Dash 8. As a PIC, he had 3000 hours, however, none of it was on the Dash 8. He stated that he was commercial rated, for single and multi-engine land airplanes, instrument, Glider, Dash 8 SIC, and Beech 1900, with no limitations. He held a first class medical with no limitations.⁶

1.2.2 Activity / 72-Hour History

The first officer's recent activities were as follows:

On Sunday, September 2, 2012, he had the day off. He usually woke up about 0700 or 0800 and tried to keep his sleep schedule consistent. He did not recall how well he slept that night; however, he felt that he had been sleeping well the past few nights. He had a normal day of activities including walking a few miles for exercise. He ate a normal meal including coffee. He believed he went to bed before 2200. He stated that

⁶ For more detailed information on the first officer's pilot certification and ratings see Operations Factual Report, pp. 8

he normally fell asleep quickly. Electronic data from his cellphone records indicated activity between 1045 and 2129.

On Monday, September 3, 2012, he had a flight to Deadhorse. He woke up about 0630 or 0700 for a 0900 flight. The duty day was about 6.8 hours and he flew Anchorage - Fairbanks - Deadhorse - Fairbanks - Anchorage. He recalled flying with the event captain that day. Era Aviation's September 3 flight log for the first officer showed that he flew with a different captain, departing Anchorage at 0920 and returning at 1713, for a total flight time of 5 hours and 7 minutes. He had a normal meal and engaged in routine activity that evening. He went to bed between 2200-2230 and had no trouble falling asleep. Electronic data from his cellphone records indicated one call at 1237 with an elapsed time of less than one minute. The remainder of the electronic activity on September 3 was between 0829 and 2116.

On Tuesday, September 4, 2012, he woke up about 0530. He believed that one of the pilots was not able to show up that day. To the best of his recollection, he flew to Deadhorse again and his show time was earlier than the previous day. Era Aviation's September 4 flight log for the first officer showed that he flew with the event captain, departing Anchorage at 0927 and returning at 1733, with a total flight time of 5 hours and 16 minutes. He went to bed between 2130-2200, or possibly as late as 2230. Electronic data from his cellphone records indicated activity between 0759 and 2251. The duration of the last telephone activity at 2251 was approximately 8 minutes.

On Wednesday, September 5, 2012, he woke up about 0530 and reported to work at 0650. He was scheduled to be on reserve and had called the night before to learn the details of his schedule. For planning purposes, he treated his schedule as a routine scheduled trip. He was scheduled for a flight from Anchorage to Cordova, departing at 0741 and returning to Anchorage at 0959. He flew with the incident captain. The flight to Cordova was about 50 minutes each way. He shot that approach and it went very well. The incident flight departed at 1021. Electronic data from his cellphone records indicated activity between 0649 and 2237.

1.2.3 Medical/Personal Issues

The first officer described his health as good with no changes in the past year. He tried to get enough sleep and reported no difficulties sleeping and had not suffered from any sleep disorders. He stated that his hearing and vision were good and he did not take any prescription or non-prescription medication. He rarely consumed alcoholic beverages and the last time he consumed alcohol prior to the event flight was one half glass of wine the day before. He had had no changes in his financial or personal life in the past year.

1.2.4 Prior Reported Incidents

The first officer stated that he had a previous incident in 2009 on a Piper Navajo where shortly after takeoff there was a loss of an engine or turbocharger. The airplane was at maximum weight and he could not continue the climb out because of the surrounding terrain, so he put the airplane down on a river bank. There were no injuries as a result of this incident.

2. Other Company Pilot Interviews⁷

2.1 Descriptions of the Captain

Interviews with other pilots who had flown with the incident captain were conducted. A line check airman who had flown with him before he was upgraded to captain explained that as a first officer the captain sometimes did the job right and other times did not. According to the line check airman, other pilots would say the captain “did not show up for work” mentally at times, and some pilots had said his nickname was “space.”

A former check airman who had flown with the captain stated that the captain had generally performed well as a first officer but occasionally seemed arrogant. For example, on one occasion he recalled the captain attempted to land three times at an airport where crosswinds exceeded 40 knots before diverting to another airport. He also indicated that the captain performed well in the simulator but some copilots had expressed concerns that he sometimes lacked focus and attention and was not always “in the moment” and that his nickname was “space.”

Three first officers who had flown with the captain recently described him as professional and approachable with good crew resource management (CRM). One also indicated that the captain ran his checklist in a formal manner.

2.2 Descriptions of the First Officer

A line check airman described the incident first officer as subpar, not the strongest pilot, and one who needed help. For example, one day on an approach to Aniak when they were below 10,000 feet on an RNAV approach, the first officer who was the pilot monitoring began to talk about the next leg of the flight to St. Marys. The check airman told the first officer to pay attention to what they had on their hands at that time rather than discussing the next leg. He added that the first officer's weaknesses were being behind the aircraft and not prioritizing. He also stated that the first officer was going through many family issues, with his wife living in Florida and having to travel

⁷ For complete interview summaries, see attachment 1.

back and forth. According to the line check airman, other captains had told him that the first officer was a "high workload" (requiring additional help or time) first officer, and 75% of the time he would be running back to the airplane to correct the logbook.

One of the captains who had flown with the first officer a week before the incident described him as not among the top tier pilots as far as his skills were concerned. He thought the first officer could not do multiple things at once or be hurried and needed time to "get his ducks in a row." He also stated that the first officer followed procedures and guidelines well; however, his situational awareness was weaker than that of other pilots and had trouble with outside distractions. As a captain, he would have to tell the first officer to pay attention by saying for example: "it isn't nice here, pay attention to me, game's on". He felt an occasional reminder was necessary with the first officer. He was also aware that the first officer had some personal problems and that it was possible for outside influences to distract the first officer.

Another captain described the first officer's CRM as good; however, he could get flustered and become easily overwhelmed with routine tasks. This captain described the first officer's situational awareness as fair but added that he had to be reminded to keep up.

3. Company Overview

3.1 Personnel's Descriptions of Company Practices⁸

Era Aviation's chief pilot described the pilot hiring process at Era Aviation as the following: The assistant chief pilot found leads on recruits from various sources including flight schools such as the aviation program at the University of Alaska. They collected resumes, performed phone interviews, conducted a knowledge test and practical test with the PC-based procedures trainer, and identified an applicant's basic instrument skills. They evaluated how readily he accepted training as a crewmember. Once in class they wanted teamwork, not cut throat competition. They expected to graduate the same number of pilots as began a training class. The minimum qualifications were 300 hours total time, commercial, instrument and multi-engine certificates, a first class medical, and no certificate action within the previous 36 months. The entry level position was BE-1900 first officer. They had been "going up" in qualifications in the last few years, and now most new pilots had 1000 hours. They had revised the requirement in the last 60 days to 1500 hours.

⁸ For complete interview summaries, see attachment 1.

According to a company line check airman, the Era Aviation's philosophy was that they wanted to know you because they could train you to fly but they could not change your personality.

A former company check airman stated that there was a "bush" mentality at the company. For example, pilots were asked to fly during volcano activity and "just skirt around it." He also had an experience where he was called to take a flight that another pilot refused and the company did not tell him that it had been refused. On another occasion, one of the pilots had flown to Valdez and wound up in an emergency because he had not received appropriate SIGMET information. He believed experienced pilots were being pushed into adverse situations. He thought the company was being intentionally "right on the edge of legality" and operating in a "wild west" manner and had developed a "bush mentality," meaning assume greater risk. The company was undoing the progress they had made in safety as a Part 121 carrier. He indicated that the company's maintenance program was the best.

3.2 Crew Resource Management Training

Crew Resource Management (CRM) training was conducted with flight crewmembers at initial, recurrent, and transition. The recurrent training was conducted annually. The assistant chief pilot of Era Aviation was in charge of the CRM course and relevant training modules. The training contained information from the Federal Aviation Regulations, Era General Operations Manual, Advisory Circulars, and Discovery Report (DISC) Behavioral Profiling System for assessment and understanding of personality traits. The CRM material was delivered through lectures, group discussions, powerpoint presentations, audio/visual presentations, and computer-based profiles.⁹ The content of the CRM training emphasized the following topics:

1. Applicable FAR and GOM review (121.404)
2. Treat and Error Management (TEM)
 - a. Human Factors
 - b. Technical Skills
 - c. Workload Management
 - d. Judgment and decision making
3. Leadership and Teamwork

⁹ CRM Course material are enclosed in attachment 2

4. Communication Skills
5. Crew/Dispatch Communication and Coordination
6. CRM failures contributing to Mishaps
7. CRM model
8. Dispatcher Role in CRM
9. Company Policies Regarding CRM
10. Conflict Identification, Prevention, and Resolution
11. Characteristics of Assertiveness

4. Medical and Pathological Information

Drug and alcohol testing was conducted by Beacon Occupational Health and Safety Services on both pilots post-incident. A breath alcohol test was negative for both pilots. Toxicology results were also negative for both pilots on a wide range of drugs that included major drugs of abuse.

F. LIST OF ATTACHMENTS

- Attachment 1: Interview Summaries
- Attachment 2: Crew Resource Management course material
- Attachment 3: Lab and Toxicology Results
- Attachment 4: Era Aviation Flight Logs
- Attachment 5: Driving Restriction

Submitted by:

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Date